

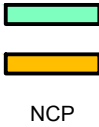



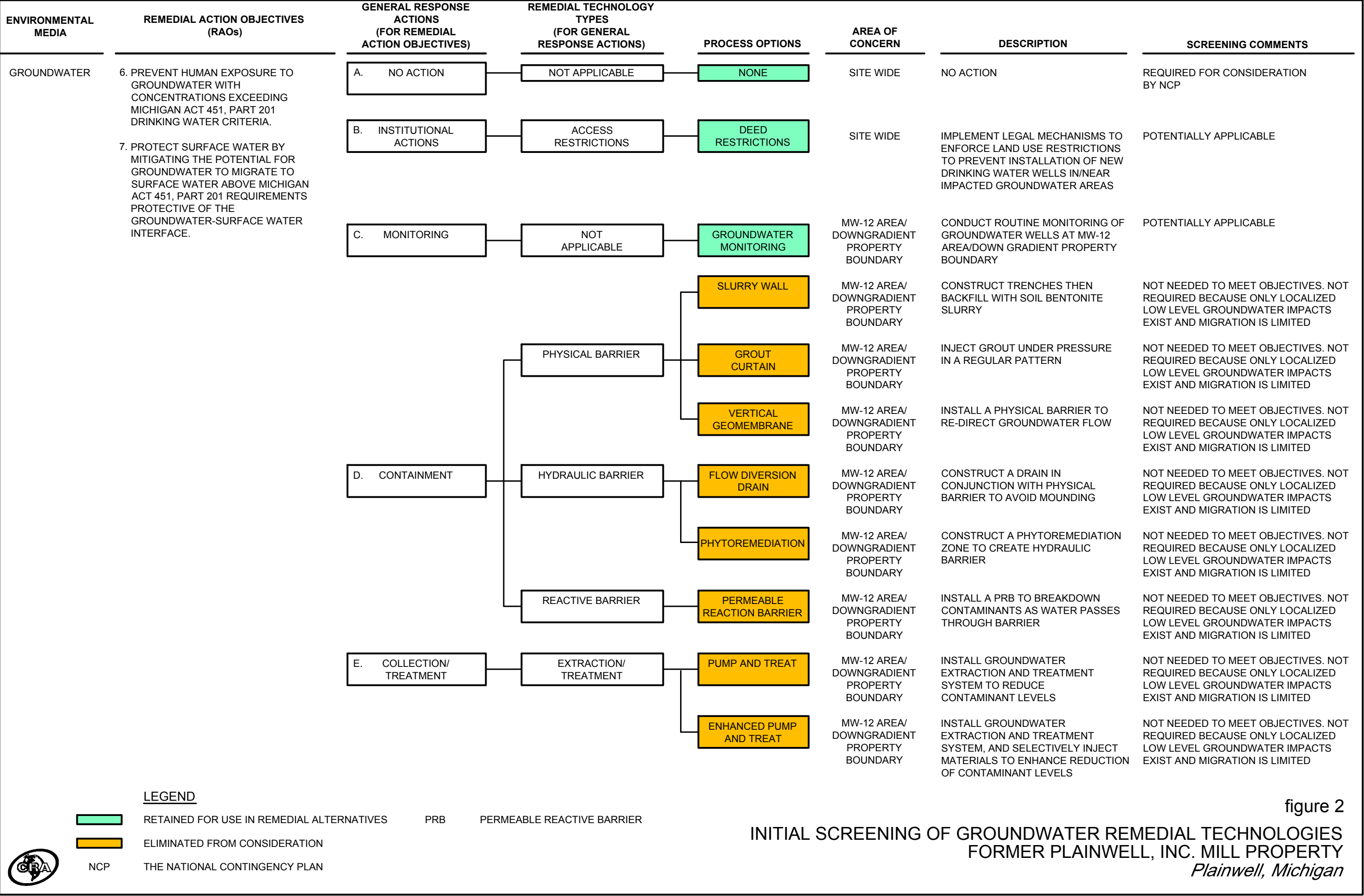
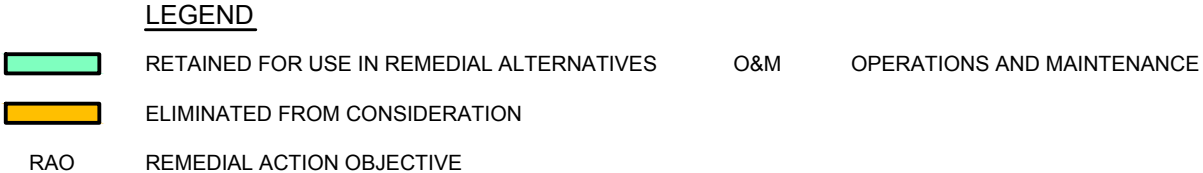
ENVIRONMENTAL MEDIA	REMEDIAL ACTION OBJECTIVES (RAOs)	GENERAL RESPONSE ACTIONS (FOR REMEDIAL ACTION OBJECTIVES)	REMEDIAL TECHNOLOGY TYPES (FOR GENERAL RESPONSE ACTIONS)	PROCESS OPTIONS	AREA OF CONCERN	DESCRIPTION	SCREENING COMMENTS
SOIL	1. PREVENT HUMAN DIRECT CONTACT EXPOSURE TO SOIL IMPACTED WITH VOCs, SVOCs, PCBs, METALS (EXCEPT ARSENIC), AND OTHER INORGANICS IN EXCEEDANCE OF THE MICHIGAN ACT 451, PART 201 CLEANUP CRITERIA AND HUMAN DIRECT CONTACT/INGESTION/ INHALATION EXPOSURE TO SOIL IMPACTED WITH ARSENIC IN EXCEEDANCE OF 40 mg/kg FOR A RESIDENTIAL SCENARIO AND 107 mg/kg FOR A NON-RESIDENTIAL SCENARIO.	A. NO ACTION	NOT APPLICABLE	NONE	SITE WIDE	NO ACTION	REQUIRED FOR CONSIDERATION BY NCP
		B. INSTITUTIONAL CONTROLS	ACCESS RESTRICTIONS	DEED RESTRICTIONS	SITE WIDE	IMPLEMENT LEGAL MECHANISMS TO ENFORCE LAND USE RESTRICTIONS TO REQUIRE LAND USE CONSISTENT WITH DEVELOPMENT PLAN	POTENTIALLY APPLICABLE
	2. PREVENT THE POTENTIAL FOR LEACHING OF CONTAMINANTS FROM SOIL TO GROUNDWATER AND ULTIMATELY MIGRATING TO SURFACE WATER AT CONCENTRATIONS ABOVE THE MICHIGAN ACT 451, PART 201 CLEANUP CRITERIA FOR VOCs, SVOCs, PCBs, METALS, AND OTHER INORGANICS.	C. CONTAINMENT	CAPPING	CLEAN FILL	SITE WIDE	PLACE APPROPRIATE COVER/CAPPING SYSTEM OVER AREAS OF SOIL IMPACT EXCEEDING RAOs	POTENTIALLY APPLICABLE, BUT NOT APPROPRIATE/EFFECTIVE BECAUSE ONLY LOCALIZED LOW LEVEL SOIL IMPACTS EXIST
			CONSOLIDATION/ CAPPING	CONSOLIDATE IMPACTED MATERIALS/CAP WITH CLEAN FILL	SITE WIDE	EXCAVATE AREAS OF SOIL IMPACT EXCEEDING RAOs AND CONSOLIDATE MATERIAL IN CENTRALIZED AREA OF SITE; CONSTRUCT APPROPRIATE COVER/CAPPING SYSTEM OVER CONSOLIDATION AREA, AND ALONG KALAMAZOO RIVER AND MILL RACE	POTENTIALLY APPLICABLE
	3. MITIGATE THE POTENTIAL FOR HUMAN INHALATION EXPOSURE TO INDOOR AIR VAPORS RESULTING FROM SOIL IMPACTED ABOVE MICHIGAN ACT 451, PART 201 CLEANUP CRITERIA FOR VOCs AND METALS.	D. EXCAVATION	EXCAVATION	REMOVAL AND OFF-SITE DISPOSAL	SITE WIDE	EXCAVATE AREAS OF SOIL IMPACT EXCEEDING RAOs FOR TRANSPORTATION AND DISPOSAL OFF-SITE AT APPROPRIATELY PERMITTED FACILITIES	POTENTIALLY APPLICABLE
	4. PREVENT AVIAN AND MAMMALIAN RECEPTOR EXPOSURE TO SURFACE SOIL IN WOODED RIPARIAN AREAS ALONG THE KALAMAZOO RIVER WITH 95 PERCENT UPPER CONFIDENCE LIMIT (UCL) CONCENTRATIONS FOR HIGH MOLECULAR WEIGHT (HMW) POLYCYCLIC AROMATIC HYDROCARBONS (PAHs), ANTIMONY, CADMIUM, COPPER, LEAD, MERCURY, SELENIUM, VANADIUM, AND ZINC WITH CONCENTRATIONS EXCEEDING THE FOLLOWING LEVELS: 25.6 mg/kg FOR HMW PAHs; 2,150 mg/kg FOR ANTIMONY; 7.76 mg/kg FOR CADMIUM; 285 mg/kg FOR COPPER; 391 mg/kg FOR LEAD; 1.95 mg/kg FOR MERCURY; 7.66 mg/kg FOR SELENIUM; 49 mg/kg FOR VANADIUM; AND 789 mg/kg FOR ZINC.	E. TREATMENT	IN-SITU	CHEMICAL/BIOLOGICAL TREATMENT	SITE WIDE	TREAT AREAS OF SOIL IMPACT USING CHEMICAL OR BIOLOGICAL TREATMENT METHODS TO REDUCE CONTAMINANTS PRESENT TO LEVELS BELOW THE RAOs	NOT APPROPRIATE/EFFECTIVE BECAUSE ONLY LOCALIZED LOW LEVEL SOIL IMPACTS EXIST
			EX-SITU	PHYSICAL/CHEMICAL/ BIOLOGICAL TREATMENT	SITE WIDE	EXCAVATE AREAS OF SOIL IMPACT EXCEEDING RAOs FOR ON-SITE TREATMENT USING APPROPRIATE TREATMENT TECHNOLOGY TO REDUCE CONTAMINANTS PRESENT TO BELOW THE RAOs AND PLACE TREATED MATERIAL BACK IN EXCAVATION AREAS	NOT APPROPRIATE/EFFECTIVE BECAUSE ONLY LOCALIZED LOW LEVEL SOIL IMPACTS EXIST
	5. PROTECT SURFACE WATER AND SEDIMENTS BY MITIGATING THE POTENTIAL FOR EROSION OF SOIL TO THE KALAMAZOO RIVER AND MILL RACE.						
<div><div></div><div><p>LEGEND</p><p> RETAINED FOR USE IN REMEDIAL ALTERNATIVES</p><p> ELIMINATED FROM CONSIDERATION</p><p>NCP THE NATIONAL CONTINGENCY PLAN</p></div></div>							

figure 1

INITIAL SCREENING OF SOIL REMEDIAL TECHNOLOGIES
FORMER PLAINWELL, INC. MILL PROPERTY
Plainwell, Michigan



GENERAL RESPONSE ACTIONS (FOR REMEDIAL ACTION OBJECTIVES)	REMEDIAL TECHNOLOGY TYPES (FOR GENERAL RESPONSE ACTIONS)	PROCESS OPTIONS	AREA OF CONCERN	EFFECTIVENESS	IMPLEMENTABILITY	COST
A. NO ACTION	NOT APPLICABLE	NONE	SITE WIDE	NOT EFFECTIVE, DOES NOT ACHIEVE RAOs	NOT ACCEPTABLE	NONE
B. INSTITUTIONAL CONTROLS	ACCESS RESTRICTIONS	DEED RESTRICTIONS	SITE WIDE	MAINTAINS LAND USE CONSISTENT WITH RAOs, BUT ONLY ACHIEVES RAOs IN COMBINATION WITH OTHER ALTERNATIVES	EASILY IMPLEMENTED, REQUIRES LEGAL SERVICES AND ONGOING ENFORCEMENT	LOW
C. EXCAVATION, CONSOLIDATION & CAPPING	CONSOLIDATION/CAPPING	CONSOLIDATE IMPACTED MATERIALS/CAP WITH CLEAN FILL	SITE WIDE	EFFECTIVE TO REDUCE EXPOSURE TO CONTAMINANTS OF CONCERN FOR HUMAN AND ECOLOGICAL RECEPTORS. DOES NOT REDUCE THE QUALITY OF IMPACTED MATERIAL ON-SITE	EASILY IMPLEMENTED, REQUIRES INSTITUTIONAL CONTROLS TO BE EFFECTIVE	MODERATE CAPITAL, MODERATE O&M
DEXCAVATION TO LAND USE-BASED CRITERIA WITH OFF-SITE DISPOSAL	EXCAVATION	REMOVAL AND OFF-SITE DISPOSAL	SITE WIDE	EFFECTIVE TO REDUCE EXPOSURE TO CONTAMINANTS OF CONCERN FOR HUMAN AND ECOLOGICAL RECEPTORS AND REDUCING QUANTITY OF IMPACTED MATERIAL ON-SITE	EASILY IMPLEMENTED, REQUIRES INSTITUTIONAL CONTROLS TO BE EFFECTIVE	MODERATE CAPITAL, LOW O&M
E. EXCAVATION TO RESIDENTIAL CRITERIA WITH OFF-SITE DISPOSAL	EXCAVATION	REMOVAL AND OFF-SITE DISPOSAL	SITE WIDE	EFFECTIVE TO REDUCE EXPOSURE TO CONTAMINANTS OF CONCERN FOR HUMAN AND ECOLOGICAL RECEPTORS AND REDUCING QUANTITY OF IMPACTED MATERIAL ON-SITE	EASILY IMPLEMENTED	HIGH CAPITAL, LOW O&M
<div><div><div>LEGEND</div><div>RETAINED FOR USE IN REMEDIAL ALTERNATIVES</div><div>ELIMINATED FROM CONSIDERATION</div><div>RAO</div><div>REMEDIAL ACTION OBJECTIVE</div><div>O&M</div><div>OPERATIONS AND MAINTENANCE</div></div><div><div>figure 3</div><div>SECONDARY SCREENING OF SOIL PROCESS OPTIONS</div><div>FORMER PLAINWELL, INC. MILL PROPERTY</div><div>Plainwell, Michigan</div></div></div>						

